

Designated Uses - Can they
be changed?

Module Outline

- What are they? Why are they important?
- What is the statutory and regulatory basis for them?
- What are some examples of designated uses?
- What are my options for changing them?
- What are existing uses?
- What is a use attainability analysis?

Designated Uses: Definition

(see 40 CFR 131.3(f))

Regulatory:

- Those uses specified in state or tribal water quality standards regulations for each water body or segment, whether or not they are being attained.

Plain language:

- A concise statement of management objectives and expectations for each of the individual surface waters under state/tribal jurisdiction.

Why are Designated Uses Important? (1)

- Getting water quality standards right is critical to achieving CWA goals and restoring water quality
- Getting WQS right starts with getting designated uses right

Why are Designated Uses Important? (2)

- Establish water quality goals for a specific water body
- Determine criteria needed to protect use
 - Criteria are the regulatory basis for management actions like attainment decisions, Total Maximum Daily Loads, and NPDES permit limits

Where Does the CWA Talk About Uses? (1)

- CWA 101(a)(2) sets a national goal that, wherever attainable, water quality provides for the protection and propagation of fish, shellfish and wildlife, and recreation in and on the water
 - Includes protection of aquatic life for human consumption

Where Does the CWA Talk About Uses?(2)

- CWA 303 (c)(2)(a): water quality standards shall serve the purposes of the [Act] and consider the *use* and value for public water supplies, propagation of fish and wildlife, recreational, agricultural, industrial and other purposes, and...navigation

(italics added)

What Does the Act Mean by “use” ?

- A function of, or activity in, a water that is supported by a level of water quality

The WQS Regulation

40 CFR 131.10(j); 40 CFR 131.10(k)

- The regulation effectively establishes a “rebuttable presumption” that CWA 101 (a)(2) uses are attainable
- Regulations require appropriate documentation to show such uses are not attainable (i.e. Use Attainability Analysis or UAA)
- States and Tribes have the primary role in establishing uses and in weighing evidence regarding their attainability

Categories of Designated Uses

- Protection and Propagation of fish, shellfish and wildlife
- Recreation in and on the water
- Public Water Supply
- Agricultural
- Industrial
- Navigation
- Other Purposes

Other Designated Uses

- Ceremonial Uses
- Shellfish Harvesting Areas
- Wildlife Protection
- Endangered Species Protection
- Drinking Water Source Protection
- Hydroelectric Power

Expectations for Designated Uses (1)

- Be Specified in State and Tribal WQS Regulations (40 CFR 131.10(a))
- Consider all uses identified in CWA 101(a) and 303(c) (40 CFR 131.10(a))

Expectations for Designated Uses (2) 40 CFR 131.10(d)

- Do not provide for waste transport or assimilation

40 CFR 131.10(a)

- Provide for the attainment and maintenance of the water quality standards of downstream waters

40 CFR 131.10(b)

Expectations for Designated Uses (3)

- Protect uses that can be achieved, at a minimum, by the imposition of:
 - Technology based effluent limits on point sources and
 - Cost effective and reasonable best management practices on non point sources

40 CFR 131.10(d)

- Established through a public process.

40 CFR 131.10(e)

What is a Use Refinement?

- States may refine their designated uses to reflect more specific goals and what is attainable.
- Use refinement – broad term relating to any activity to review and revise the designated uses.
 - Subcategorization – refining by subdividing into smaller more similar categories
 - similarities in natural conditions (e.g. water body type)
 - anthropogenic disturbance history, resulting biological condition, and potential to recover.

Why are Refinements to Designated Uses Important ?

- Describe the expected condition more accurately.
 - waterbody type / ecoregion
 - human caused conditions that cannot be remedied
- Provide clear articulation of management objectives and expectations
- Facilitate adoption of more effective criteria and thus appropriate endpoints for permits and TMDLs
- Capture incremental improvements over time

To Refine Designated Uses, States/Tribes May...

- Adopt seasonal uses 40 CFR 131.10 (f) **AND/OR**
- Adopt sub-categories of a use 40 CFR 131.10(c)
 - appropriate criteria may be set to reflect the “varying needs” of such uses
 - when adopting subcategories with less stringent criteria, a UAA is required

Sub-Categories of Uses (1): CWA 101(a)

- Protection and propagation of fish, shellfish and wildlife:
 - Simple
 - Coldwater fishery/Warmwater fishery
 - 40 CFR131.10 (c)
 - Complex
 - Ecologically defined uses in Ohio and Maine

Sub-Categories of Uses (2): CWA 101(a)

- Recreation in and on the water
 - Primary Contact Recreation
 - Seasonal Primary Contact Recreation
 - MN: Primary Contact Recreation May 1 – Oct 1
 - Secondary Contact Recreation (after UAA)

Refining Uses With More Specific Subcategories (1)

- Classification based on natural differences in expected condition:
 - Lakes and Streams
 - Ecoregions

- Classification based on intensity of use
 - Low Frequency Swimming Area

Refining Uses With More Specific Subcategories (2)

- Different expectations because of human caused conditions
 - Urban Spillway
- Advantage: Better describe use allowing tailored criteria for more specific levels of protection

Boundaries on Refining Designated Uses

- May not remove an existing use
- Must be supported by a use attainability analysis under conditions specified in 40 CFR 131.10(j).
- Must reflect the highest attainable use.

Existing Uses: Definition

Regulatory:

- Those uses actually attained in a waterbody on or after November 28, 1975, whether or not they are included in the water quality standards (40 CFR 131.3 (e))

Plain Language:

- Defines an absolute “floor” or minimum use and necessary level of water quality

What is an Existing use (1)?

- Actually attained
 - The use **and** the water quality necessary to support the use
- Regulations require protection of *uses*, not specific water quality parameters
- Existing uses are not generally adopted into state/tribal law nor is it required
- State and tribes are not bound to describe existing uses in the same way their WQS articulate designated use.
- States and tribes can articulate existing uses more specifically than designated use to reflect the degree of use that has actually been attained.

What is an Existing use ? (2)

- Not intended to apply where the state or tribe wishes to remove a use if the removal would result in improving the condition of a waterbody (e.g. adding a more stringent use or a use more reflective of the expected condition).

How Do I Determine an Existing Use?

- Made on a site-specific basis
- Consider the quantity, quality, and reliability of different types of available data
- Determine the extent to which water quality since 1975 has supported an actual use occurring in the water
- States/tribes have flexibility to determine existing uses where:
 - Use has not occurred, but water quality is sufficient to support it; or
 - Data are inconclusive or lacking
 - There is a lack of data

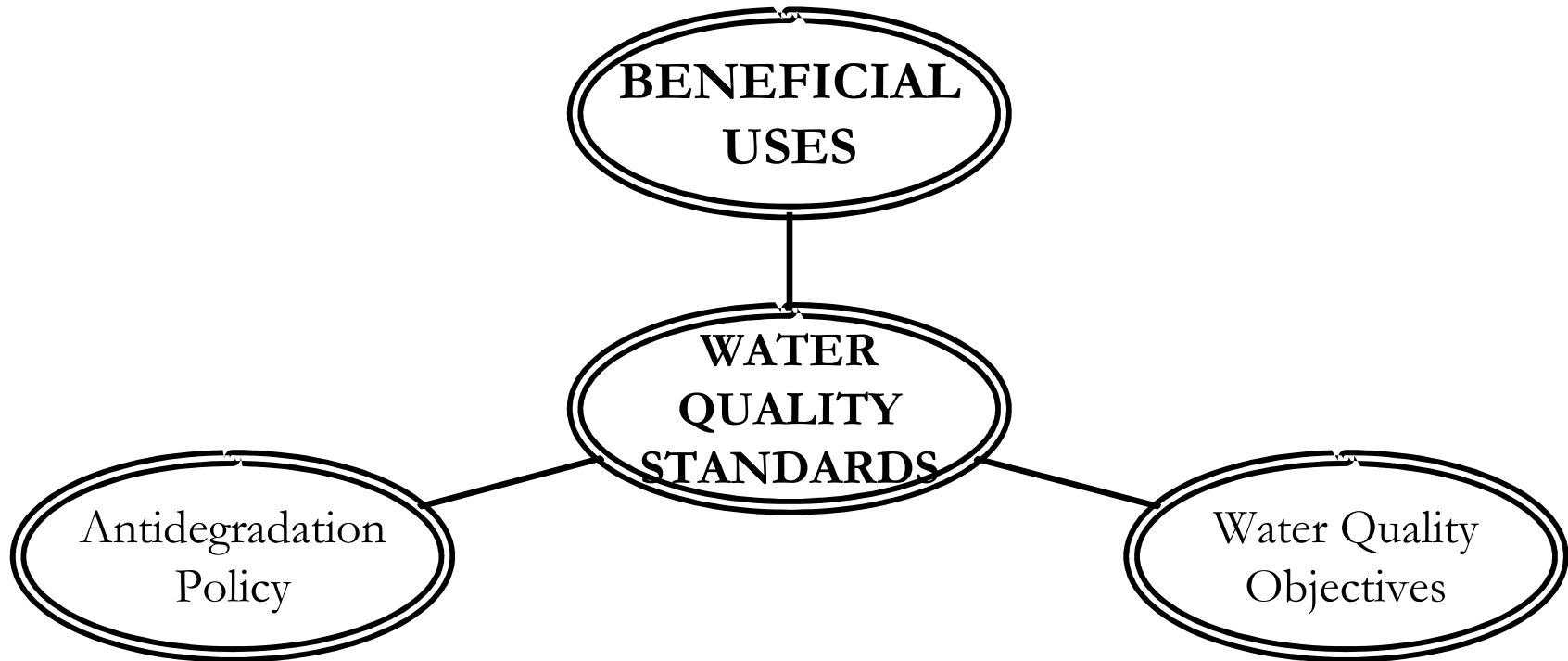
What is the difference between Existing uses and Designated uses?

- The existing use identifies a minimum use and level of water quality that must be maintained to protect uses that have already been attained
- A designated use, on the other hand, expresses the state/tribal objectives (i.e., the highest attainable uses) for a waterbody.
 - designated use may or may not have actually been attained in the waterbody

Beneficial Uses: California Perspective



Water Quality Standards: Beneficial Use Component



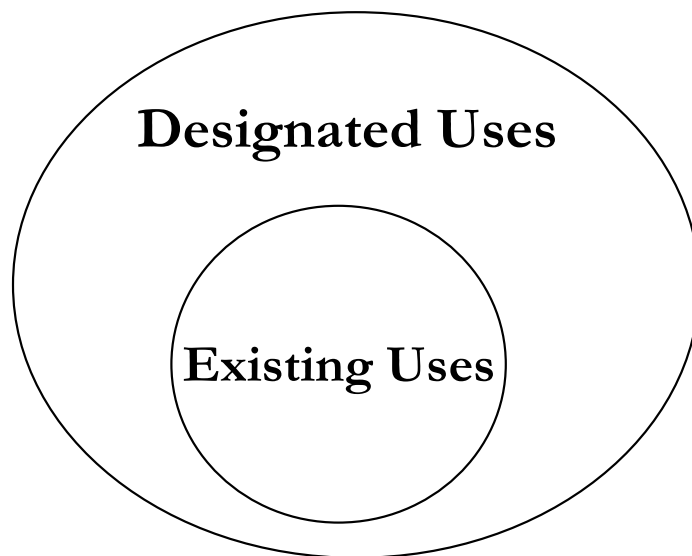
Beneficial Uses = Designated Uses

- Those uses specified in State or Tribal water quality standards rules for each waterbody or waterbody segment, whether or not those uses are being attained. - 40 CFR 131.3(e)
 - Goals or “desired” uses of a waterbody
- Existing use – a use that was actually attained in a waterbody on or after November 28, 1975*
 - “Actually attained” =
 - 1) Use has occurred or
 - 2) Water quality has been sufficient to support use
 - *Not just current/present use – includes some historical uses, too*

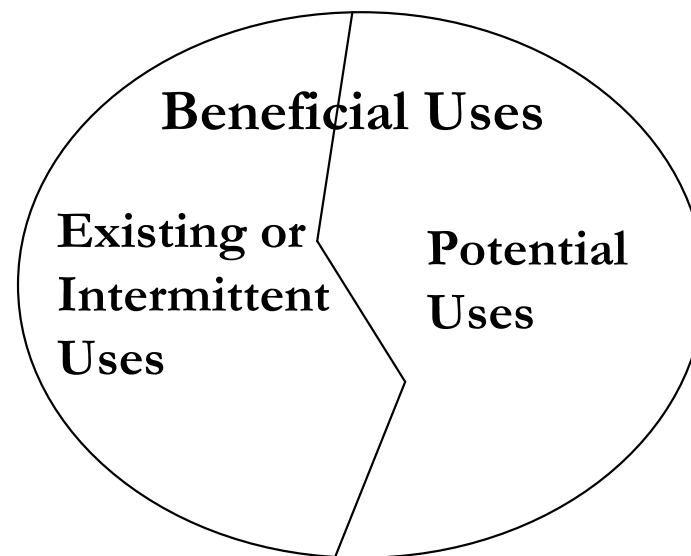
*Date of original water quality standards regulation

Federal & State Terminology

Federal Parlance



CA State Parlance



FEDERAL DESIGNATED USES =
CA STATE BENEFICIAL USES

CA Potential Uses

- May be existing, but no documentation of use
- May be a “goal” use – i.e., one that is not existing
 - Past use (occurring before November 28, 1975)
 - Desired use
 - Plans to put water to such future use;
 - Conditions make such future use likely;
 - Statewide policy (Sources of Drinking Water Policy);
 - Designation by Regional Board as goal use;
 - Public desire to put water to such use.

Application of Beneficial Uses in CA: “Waters of the State”

- In CA, beneficial uses apply to “waters of the state”, which means any surface water or groundwater, including saline waters, within the boundaries of the state.
 - Broader application than federal designated uses, includes groundwater and some isolated surface waters
 - “Waters of the U.S.” does not include groundwater and “isolated, intrastate and nonnavigable waters”

Application of Beneficial Uses in CA (cont.)

- Specific waterbodies / groundwater basins
- Entire hydrographic unit
- Tributary rule - The beneficial uses of any specifically identified water body generally apply to all its tributaries
 - Similar rule for groundwater

Statutory Use Categories

Federal Clean Water Act §§ 101(a)(2), 303(c)(2)(a)

- ...it is the national goal that wherever attainable, an interim goal of water quality which provides for the protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the water be achieved ...;
- ...Such standards shall be such as to protect the public health or welfare, enhance the quality of water ... taking into consideration their use and value for public water supplies, propagation of fish and wildlife, recreational purposes, and agricultural, industrial, and other purposes, and also taking into consideration their use and value for navigation.

Cal. Water C. §13050

- “Beneficial uses” of the waters of the state that may be protected against quality degradation include, but are not limited to, domestic, municipal, agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves.

Federal CWA Categories	Cal. Water C. Categories	CA Basin Plan Categories
Propagation of fish, shellfish & wildlife	Preservation and enhancement of fish, wildlife, and other aquatic resources or preserves	WARM, LWRM, COLD, SAL, EST, MAR, WILD, BIOL, ASBS, RARE, MIGR, SPWN
Recreation in & on the water	Recreation; aesthetic enjoyment	REC-1, Limited REC-1, REC-2, COMM, SHELL
Public water supplies	Domestic and municipal supply	MUN*
Agricultural use	Agricultural supply	AGR*
Industrial use	Industrial supply	IND*, PRO*
Navigation	Navigation	NAV
Other purposes	Power generation; other beneficial uses	GWR, FRSH, POW, AQUA, WET, FLD, WQE, CUL, FISH

Protection of Beneficial Uses

- Generally, Existing and Potential Uses are protected with the same water quality standards
- “Rebuttable presumption” that fishable – swimmable uses are attainable
 - Most surface waters are designated with REC & aquatic life beneficial uses
- Existing uses – whether designated or not – must be protected

Revising Beneficial Uses

- 23 standardized beneficial use categories developed in mid-1990s
- New beneficial use categories, or subcategories, may be added by individual Water Boards
 - Wetland: WET, FLD, WQE
 - Cultural: CUL
 - Subsistence fishing: FISH
 - Limited Warmwater habitat: LWRM
 - Limited contact recreation: LREC-1

Revising Beneficial Uses

- Requires Basin Plan Amendment
 - Create new use category or subcategory
 - Demonstrate necessity of new beneficial use definition
 - Designate waterbodies with beneficial use
 - Demonstrate that use “exists” or has the potential to occur in the water body
 - De-designate or downgrade use
 - UAA and 40 CFR 131.10(g) factors
- Requires adoption by RB & approval by SB, OAL, and EPA [for surface water only]

De-designating Beneficial Uses

- May not remove an existing use [40 CFR 131.10]
- If use is not existing
 - For surface water, follow federal regulations at 40 CFR 131.10(g)
 - For groundwater, no explicit requirements
 - Demonstrate that use is not a “past, present or probable use”
- For MUN use, demonstrate that an exception is met [Statewide Sources of Drinking Water Policy (SB Res. 88-63)]
- Consider antidegradation
- Triennial Review of waterbodies not designated as fishable/swimmable

California UAAs (cont.)

➤ REC

- Natural intermittent or low flow conditions
- Hydromodifications
- Other considerations: access, recreational facilities, location & safety

➤ SHELL

- Natural intermittent or low flow conditions
- Hydromodifications
- Natural physical features unrelated to WQ

California UAAs (cont.)

➤ MUN

- Naturally occurring pollutant concentrations
- Natural intermittent or low flow conditions
- Others

➤ Aquatic Life Uses

- Hydromodifications
- Others

Emerging Beneficial Use Issues in CA

- REC Uses
 - REC-1 Use in engineered channels
 - REC-1 Use & impacts from natural sources of bacteria
- Wetland Beneficial Uses
 - Beneficial uses (WET, FLD, WQE)
 - Statewide effort – new beneficial use definitions & corresponding WQOs
- Subsistence Fishing
 - New beneficial use (Region 1)
 - Available survey instruments to document use
- Shellfish Beneficial Use – commercial, recreational, bait
 - Survey of use (2008)
- Tiered Aquatic Life Uses (“TALU”)

Introduction to Criteria

- What exactly is meant by the term "Criteria" (Water Quality Objectives in CA)
- What do the WQS regulations require for state adopted criteria?
 - For what types of criteria has EPA developed recommendations?

Water Quality Criteria (40 CFR 131.3)

- Discussed in Sections 304(a) and 303(c) of the Act
- A concentration, level or narrative statement
- Represent a level of water quality that supports a particular use
- When criteria are met, water quality will protect the designated use

Water Quality Criteria

1 Word - 2 Meanings

- Scientifically defensible guidance developed and published by EPA per CWA § 304(a)
 - Basis for Federal promulgation when necessary
- Adopted part of State/Tribal WQS
 - Section 303(c)

Water Quality Criteria Requirements (40 CFR 131.11)

- States/Tribes Must adopt criteria that protect the designated use:
 - Based on a sound, scientific rationale
 - Sufficient parameters to protect the designated use
 - Must support the most sensitive use
(for waters with multiple use designations)

Water Quality Criteria: Forms (40 CFR 131.11b)

- States and Tribes should adopt numeric criteria based on:
 - 304(a) guidance
 - 304(a) guidance modified to reflect site specific conditions
 - Other scientifically defensible methods
- States/Tribes should adopt narrative criteria:
 - Where numeric criteria cannot be established
 - Or to supplement numeric criteria

Special Criteria Requirements for CWA 307(a) “Priority Pollutants”

- 1987 CWA Amendment - CWA Section 303(c)(2)(B)
- For 307(a) Pollutants Where EPA Has Published 304(a) Guidance - States Shall Adopt Numeric Criteria Where Discharge/Presence Can Reasonably be Expected to Interfere with Designated Uses
- States Must Identify How They Intend to Regulate Point Sources of Priority Pollutants if They Use Narrative Criteria
- EPA Promulgation

CWC Section 13241

- establish such water quality objectives that will ensure the reasonable protection of beneficial uses considering:
 - Past, present, and probable future beneficial uses of
- water.
 - Environmental characteristics of the hydrographic unit including the quality of water available
 - Water quality conditions that could reasonably be achieved through the coordinated control of all factors
 - Economic considerations.
 - The need for developing housing.
 - The need to develop and use recycled water

NUMERIC CRITERION EXAMPLE

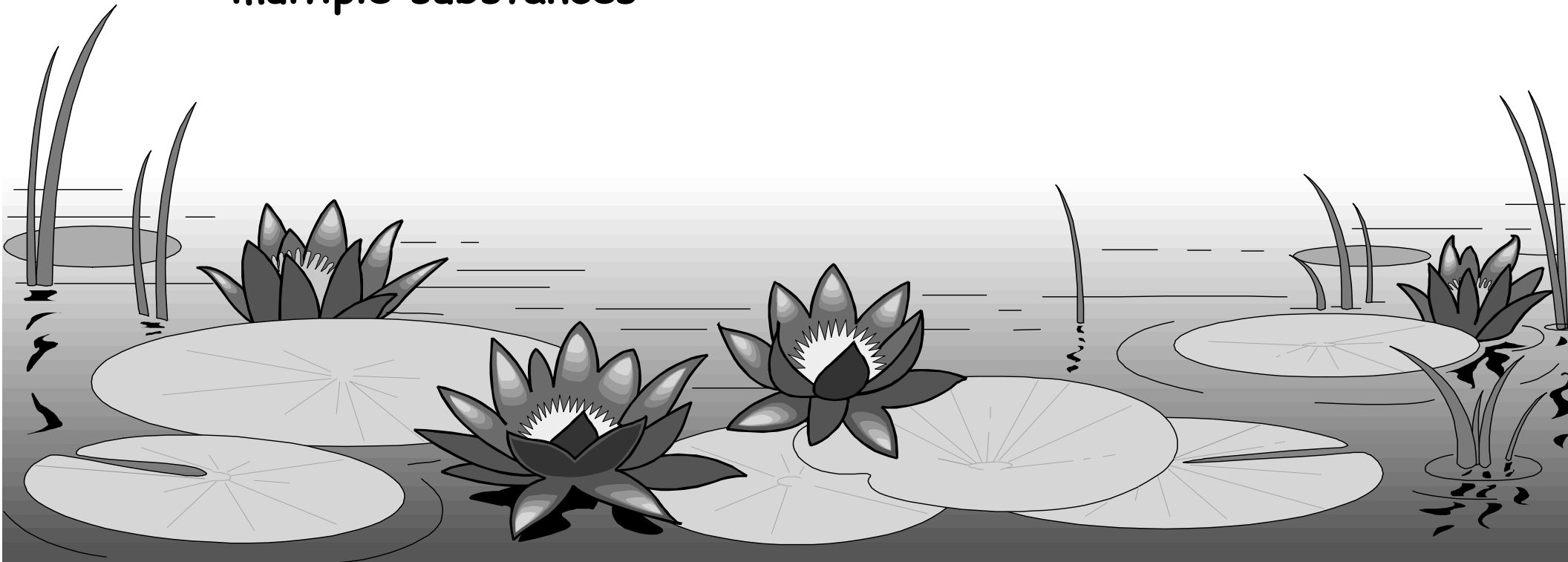
For the protection of Human Health from the Toxic Effects of Copper, the Concentration of Copper in Water Should not Exceed the Recommended Criterion Level of $1300 \mu\text{g/L}$.



NARRATIVE CRITERION EXAMPLE

➤ Toxicity

All waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life. This objective applies regardless of whether the toxicity is caused by a single substance or the interactive effect of multiple substances



TYPES OF WATER QUALITY CRITERIA

- Human Health Criteria
- Bacteriological Criteria
- Aquatic Life Criteria
- Sediment Quality Assessments
- Biological Criteria
- Nutrient Criteria
- Others

Study Question 1

- A designated use must apply to an entire waterbody.
 - True
 - False

Study Question 2

- Which of the following cannot be a State/Tribal designated use?
 - a. navigation
 - b. boating
 - c. propagation of fish
 - d. waste transport
 - e. drinking water
 - f. swimming

Study Question 3

- What is the minimum designated use(s) expected by the Water Quality Standards regulations?
 - a. Fishing
 - b. propagation of fish, shellfish, wildlife and recreation in and on the water
 - c. drinking water
 - d. navigation
 - e. agriculture

Study Question 4

- A use must be attained before the State or Tribe can designate it for a particular waterbody.
 - True
 - False

Study Question 5

- Recreation is often divided into what two subcategories?
 - a. primary contact/secondary contact
 - b. fishing/swimming
 - c. boating/wading
 - d. summer/winter